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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,527	09/08/2003	Robert Alan Ulichney	200310065-1	9175
22879	7590	01/27/2005	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			BLACKMAN, ROCHELLE ANN J	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/657,527

Applicant(s)

ULICHNEY ET AL.

Examiner

Rochelle Blackman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/22/03 & 10/27/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

### ***Specification***

The disclosure is objected to because of the following informalities: on pg. 16, lines 4, 5, 17, and 21, "[Attorney Docket No. 15311-2347]" should be replaced with the corresponding application Serial No., - 10/612,308-. Appropriate correction is required.

### ***Claim Objections***

Claim 11 is objected to because of the following informalities: on line 4 of the claim, "system" should be - apparatus-. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raskar (U.S. Patent No. 6,520,647) in view of Iwai et al. (U.S. Patent No. 6,816,187).

Raskar discloses a system/ apparatus (FIGS. 1-4) for correcting non-uniformity in luminance of an image displayed with an oblique shape on a screen (101) having a surface, the system comprising: a projector (103, 200) for generating the image, the projector having a non-perpendicular optical axis relative to the surface of the screen (see optical axis of 103 and 200); wherein the projector has a plurality of pixels for use in generating images and each projector pixel subtends to a corresponding projected area on the screen (see col. 3, lines 17-21); a camera / means (203) for capturing the image, the camera having a substantially perpendicular optical axis relative to the surface of the screen; wherein the attenuation array includes a first coordinate system representing the projector, a second coordinate system representing the surface, and a homography between the first coordinate system and the second coordinate system (see col. 3, lines 17-40); wherein the homography includes parameters  $h_7$ ,  $h_8$  and  $h_9$ , the first coordinate system includes an  $x_p$  and a  $y_p$  coordinate, and a value  $|h_7x_p + h_8y_p + h_9|$  (see FIG. 4, col. 3, lines 17-40 and col. 3, line 55 to col. 4, line 37); the system comprising: means (see fig. 4 and col. 3, lines 17-40 and col. 3, line 55 to col. 4, line 37) for calculating an attenuation array based upon the captured image; further comprising: means (also see fig. 4 and col. 3, lines 17-40 and col. 3, line 55 to col. 4, line 37) for calculating homographies between the means for capturing, the screen, and the projector; and means (see 401 and 402 of FIG. 4) for modifying a shape of the image based upon the homographies; further comprising: means (also see 203) for identifying

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the projector pixel that subtends to the largest projected area on the screen, and means for organizing the ratio determined for each pixel into an array (also see FIG. 4, col. 3, lines 17-40 and col. 3, line 55 to col. 4, line 37); The method claims are similarly met by the features and function of the above-mentioned elements.

Raskar does not appear to disclose modifying "luminance" information to drive the projector/ a "luminance" correction engine/ means for modifying luminance information of an input image.

Iwai teaches modifying luminance information to drive the projector/ providing a luminance correction engine/ providing a means for modifying luminance information of an input image (see 11 of FIG. 1, S30 of FIG. 3, see FIGS. 4 and 5 and see col. 15, lines 14-32).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the method/ system/ apparatus of the Raskar reference with a method of modifying luminance information, a luminance correction engine, or means for modifying luminance information, as taught by Raskar in order to minimize a luminance error between corresponding pixels of the projector, camera, and screen (see col. 5, lines 15-24).

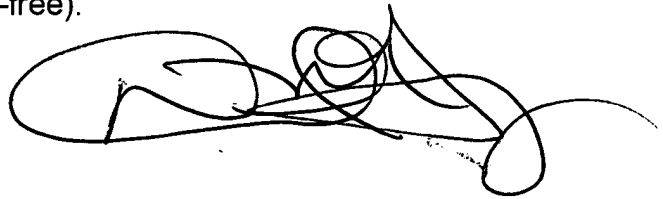
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rochelle Blackman whose telephone number is (571) 272-2113. The examiner can normally be reached on M-F 8:00-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'David Gray', with a large, stylized flourish extending to the right.

**David Gray**  
**Primary Examiner**

RB